

10. Patryk

Program Name: Patryk.java

Input File: patryk.dat

Patryk needs help with an unusual sorting problem. He has a list of 5-digit numbers and needs them sorted so the numbers are sorted from right-to-left instead of a normal left-to-right order.

Given numbers: 53334 82529 47619 68398 90010 23633 52118 49703 62205 56691 73206

Ascending sort: 23633 47619 49703 52118 53334 56691 62205 68398 73206 82529 90010

Descending sort: 90010 82529 73206 68398 62205 56691 53334 52118 49703 47619 23633

“Reverse-digit”

Ascending sort: 90010 56691 49703 23633 53334 62205 73206 62258 48458 47619 82529

The “Reverse-digit” sorted list starts with all numbers that end with 0 and following numbers are increasing in that position finishing with those that end with 9. The third and fourth numbers both end with 3, so they are sorted by the next digit to left and, when that digit is the same as in 48458 and 62258, the next digit establishes the correct order. The same process is used when the remaining digits match, the digit to left determines their correct order.

Can you help Patryk solve this sorting problem?

Input: First line will contain an integer in range [5,50] which is the number of integers that follow remaining lines of data, separated by whitespace. All those integers are 5-digit numbers in range [10000, 99999].

Output: A vertical list of the “reverse-digit” sorted numbers as described above.

Sample input:

```
11
53334 82529 47619 48458 90010 23633
62258 49703 62205 56691 73206
```

Sample output:

```
90010
56691
49703
23633
53334
62205
73206
62258
48458
47619
82529
```